

California Regional Water Quality Control Board  
Santa Ana Region  
3737 Main Street, Suite 500  
Riverside, CA 92501-3348

NOTICE OF PUBLIC HEARING

for

Order No. R8-2009-0003, NPDES No. CAG998001  
General Waste Discharge Requirements for Discharges to Surface Waters  
That Pose an Insignificant (De Minimus) Threat to Water Quality  
(National Pollutant Discharge Elimination System Permit)

And

Order No. R8-2009-0004  
Amending Order No. R8-2008-0059, NPDES No. CAG648001  
General Waste Discharge Requirements for Discharges to Surface Waters  
of Process Wastewater Associated with Certain Wellhead Treatment Systems  
(National Pollutant Discharge Elimination System Permit)

On the basis of lawful standards and regulations, the California Regional Water Quality Control Board, Santa Ana Region proposes to issue, with some modifications, the general waste discharge requirements for discharges to surface waters that pose an insignificant threat to water quality within the Santa Ana Region. In addition, the Regional Board proposes to amend the general waste discharge requirements for discharges of process wastewater associated with certain wellhead treatment systems within the Santa Ana Region to include effluent limitations and monitoring requirements for 1,2-Dibromo-3-chloropropane (DBCP).

The Board is seeking comments concerning these proposed actions and the potential effects of the discharges on the water quality and beneficial uses of the affected receiving waters within the Santa Ana Region.

The Board will hold a public hearing to consider adoption of the proposed waste discharge requirements as follows:

DATE: January 23, 2009  
TIME: 9:30 a.m.  
PLACE: City Council Chambers of Loma Linda  
25541 Barton Road  
City of Loma Linda

The Board's proposed Orders, related documents, and all comments and petitions received may be inspected and copied at the Regional Board office, 3737 Main Street, Suite 500, Riverside, CA 92501-3348 (phone 951-782-4130) by appointment scheduled between the hours of 9:00 a.m. and 3:00 p.m., Monday through Friday. Copies of the proposed Orders will be mailed to interested persons upon request to Jane Qiu at (951) 320-2008. The proposed Orders can also be downloaded from our website at [http://www.waterboards.ca.gov/santaana/board\\_decisions/tentative\\_orders/index.shtml](http://www.waterboards.ca.gov/santaana/board_decisions/tentative_orders/index.shtml) starting December 24, 2008

Interested persons are invited to submit written comments on the proposed Orders No. R8-2009-0003 and R8-2009-0004. Interested persons are also invited to attend and express their views on issues relating to the proposed Orders. Oral statements will be heard, but should be brief to allow all interested persons time to be heard. For the accuracy of the record, all testimony (oral statements) should be submitted in writing.

Although all comments that are provided up to and during the public hearing on this matter will be considered, receipt of comments by January 7, 2009 would be appreciated so that they can be used in the formulation of the draft Orders that will be transmitted to the Board two weeks prior to the hearing. To view or download a copy of the tentative Order that the Board will consider at its meeting, please access our website at [http://www.waterboards.ca.gov/santaana/board\\_info/agendas/2008\\_agendas.shtml](http://www.waterboards.ca.gov/santaana/board_info/agendas/2008_agendas.shtml) on or after January 12, 2009.

Any person who is physically challenged and requires reasonable accommodation to participate in this Regional Board Meeting should contact Felipa Carrillo at (951) 782-3285 no later than January 12, 2009. Please bring the foregoing to the attention of any persons known to you who would be interested in this matter.



# California Regional Water Quality Control Board Santa Ana Region



**Linda S. Adams**  
Secretary for  
Environmental Protection

3737 Main Street, Suite 500, Riverside, California 92501-3348  
Phone (951) 782-4130 • FAX (951) 781-6288 • TDD (951) 782-3221  
[www.waterboards.ca.gov/santaana](http://www.waterboards.ca.gov/santaana)

**Arnold Schwarzenegger**  
Governor

December 15, 2008

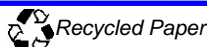
U.S. Environmental Protection Agency, Permits Issuance Section (WTR-5) - Doug Eberhardt  
U.S. Fish and Wildlife Service - Carlsbad  
U.S. Army District, Los Angeles, Corps of Engineers - Regulatory Branch  
State Water Resources Control Board, Office of the Chief Counsel – David Rice  
State Department of Water Resources - Glendale  
State Department of Fish and Game, Ontario  
South Coast Air Quality Management District  
California Department of Public Health, Santa Ana - Oliver Pacifico  
California Department of Public Health, San Diego - Steve Williams  
California Department of Public Health, San Bernardino - Sean McCarthy  
Orange County Water District - Nira Yamachika/Greg Woodside  
Orange County Resources and Development Management Department - Chris Crompton  
Orange County Public Facilities and Resources Department, Flood Control – Andy Ngo  
Orange County Planning & Development Services Department  
Orange County Health Care Agency – Larry Honeybourne  
San Bernardino County Flood Control and Transportation Department - Naresh Varma  
San Bernardino County Environmental Health Department  
San Bernardino County Department of Public Works, Environmental Management Division  
Riverside County Flood Control and Water Conservation District – Jason Uhley  
Riverside County Environmental Health Department - Sandy Bonchek  
City of Riverside, Public Utilities – David Ferguson  
City of San Bernardino, Municipal Water Department – Stacey Aldstadt  
City of Loma Linda, Public Works Department – T. Jarb Thaipejr  
Tetra Tech, Irvine – Scott Szymborski  
Orange County Coastkeeper - Garry Brown  
Lawyers for Clean Water C/c San Francisco Baykeeper  
Inland Waterkeeper – Lee Reeder  
And the attached mailing list

**ORDER NO. R8-2009-0004, AMENDING ORDER NO. R8-2008-0059, NPDES NO. CAG648001, GENERAL WASTE DISCHARGE REQUIREMENTS FOR DISCHARGES TO SURFACE WATERS OF PROCESS WASTEWATER ASSOCIATED WITH CERTAIN WELLHEAD TREATMENT SYSTEMS**

Ladies and Gentlemen:

Enclosed is a copy of tentative Order No. R8-2009-0004 for your review and comments. Order No. R8-2009-0004 amends Order No. R8-2008-0059, NPDES No. CAG648001 to include effluent limitations for 1,2-Dibromo-3-chloropropane (DBCP) and monitoring for 1,2,3-Trichloropropane (1,2,3-TCP).

**California Environmental Protection Agency**



This Order is scheduled for consideration by the Regional Board on January 23, 2009. The Board meeting will start at 9:30 a.m. and will be held at the City Council Chambers of Loma Linda, 25541 Barton Road, City of Loma Linda. Although all comments that are provided up to and during the public hearing on this matter will be considered, receipt of comments by January 7, 2009, would be appreciated so that they can be used in the formulation of the draft Order that will be transmitted to the Board two weeks prior to the hearing. The draft Order may contain changes resulting from comments received from you and others. To view and/or download a copy of the draft Order, please access our website at <http://www.waterboards.ca.gov/santaana/html/2008agendas.html> on or after January 12, 2009.

If you have questions, please contact Jun Martirez at (951) 782-3258 or Jane Qiu at (951) 320-2008.

Sincerely,

Joanne E. Schneider  
Environmental Program Manager

Enclosures: Tentative Order No. R8-2009-0004 and Attachments

California Regional Water Quality Control Board  
Santa Ana Region

January 23, 2009

**STAFF REPORT**

**ITEM:**

**SUBJECT:** Amendment of Order No. R8-2008-0059, NPDES No. CAG648001, General Waste Discharge Requirements for Discharges to Surface Waters of Process Wastewater Associated with Certain Wellhead Treatment Systems – Order No. R8-2009-0004

**DISCUSSION:**

On June 6, 2008, the Regional Board adopted Order No. R8-2008-0059, NPDES No. CAG648001, prescribing general waste discharge requirements for discharges to surface waters of process wastewater associated with certain wellhead treatment systems within the Santa Ana Region.

Order No. R8-2008-0059, NPDES No. CAG648001 includes effluent limitations for tetrachloroethene (PCE), trichloroethylene (TCE), and perchlorate, which are the pollutants being addressed by wellhead treatment systems (WTS) sites that are currently operating in the Cities of Riverside and San Bernardino.

The City of Loma Linda is proposing to construct a new WTS plant in the City of Loma Linda. Recently, the City filed a Notice of Intent to be enrolled under Order No. R8-2008-0059, NPDES No. CAG648001. The City's Notice of Intent reported that the underlying groundwater that will be extracted for treatment and potable use contains TCE, perchlorate, elevated concentrations of 1,2-Dibromo-3-chloropropane (DBCP) and low level concentrations of 1,2,3-Trichloropropane (1,2,3-TCP). Order No. R8-2008-0059 does not include effluent limitations for either DBCP or 1,2,3-TCP.

Reasonable potential analysis of the City of Loma Linda's proposed discharges shows that discharges of DBCP will exceed water quality standards while discharges of 1,2,3-TCP will not. Therefore, it is appropriate to amend Order No. R8-2008-0059 to include effluent limitations for DBCP and monitoring for 1,2,3-TCP. Discharges from the new WTS plant can then be regulated under the Order, which would obviate the need for development and consideration of an individual permit for the facility. Should future monitoring data for 1,2,3-TCP indicate that there is reasonable potential for this constituent to result in violations of water quality standards, the Order can be amended to include appropriate effluent limitations, in addition to monitoring requirements.

Order No. R8-2008-0059 includes effluent limitations for discharges to receiving waters that are designated MUN and for those that are not designated MUN. For discharges to receiving waters designated MUN, the average monthly limits (AMLs) for the priority pollutants identified in the Order were derived from the California Toxics Rule (CTR) human health objectives for the consumption of water and organisms. For receiving waters not designated MUN, the AMLs are based on California Department of Public

Health (CDPH) maximum contaminant levels (MCLs), rather than the CTR human health objectives for consumption of water and organisms. This approach was also used in the general groundwater permit Order No. R8-2007-0008, under which these discharges were previously regulated.

DBCP is not listed in the CTR, therefore, the proposed effluent limitations for DBCP are based on the MCL. The proposed DBCP limitations apply to waters that are designated MUN and those not designated MUN. Each AML effluent limitation was multiplied by a 2.01 factor to determine the maximum daily concentration effluent limits. This is consistent with the Statewide *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy, or SIP) and the approach used in Orders No. R8-2008-0059 and R8-2007-0008.

The following shows the proposed changes to Order No. R8-2008-0059. Additions are bold and highlighted. Deletions are stricken-out.

1. Order No. R8-2008-0059, page 7 of 25, modify second paragraph of Section III. B. Industry Description, as follows:

Wellhead treatment systems (WTS) are **designed and** operated in the Region such that the product water is discharged to potable water distribution systems, rather than to surface waters. Seven such systems are now and have been operated for some years by the Cities of Riverside and San Bernardino to address groundwater contaminated by solvents and perchlorate. Other wellhead treatment systems are expected to be installed to address other recently identified contamination problems (e.g., perchlorate), with the intent to return the product water to potable water distribution systems. These systems act to restore the quality of the groundwater management zones and provide reliable water supply for domestic, industrial, and municipal uses. Generally, groundwater is extracted, treated and then delivered to the potable water supply systems. Wastes are generated in the treatment process. The most commonly used method of treatment of solvent-contaminated groundwater is granular activated carbon (GAC) adsorption. At some sites in the City of San Bernardino, air-stripping towers are used to treat a small portion of the extracted groundwater. Ion exchange/resins systems are used for treatment of perchlorate contaminated groundwater.

2. Order No. R8-2008-0059, page 13 of 25, modify Table 1 and Table 2 of Section V.A.1., Final Effluent Limitations, to include effluent limitations for DBCP, as follows:

**Table 1. Effluent Limitations Applicable to Discharges into Receiving Waters Designated MUN**

<b>Constituent</b>	<b>Maximum Daily Concentration Limit (µg/L)</b>	<b>Average Monthly Concentration Limit (µg/L)</b>
Tetrachloroethene (PCE)	1.6	0.8
Trichloroethylene (TCE)	5.4	2.7
Perchlorate	8.0	4.0
<b>1,2-Dibromo-3-chloropropane (DBCP)</b>	<b>0.4</b>	<b>0.2</b>

**Table 2. Effluent Limitations Applicable to Discharges into Receiving Waters Not Designated MUN**

<b>Constituent</b>	<b>Maximum Daily Concentration Limit (µg/L)</b>	<b>Average Monthly Concentration Limit (µg/L)</b>
Tetrachloroethene (PCE)	10.0	5.0
Trichloroethylene (TCE)	10.0	5.0
Perchlorate	8.0	4.0
<b>1,2-Dibromo-3-chloropropane(DBCP)</b>	<b>0.4</b>	<b>0.2</b>

3. Attachment E, Section IV.A., page E-7, modify Table 3. Effluent Monitoring Program, as follows; the rest of the Table 3 remains unchanged:

**Table 3. Effluent Monitoring Program**

Parameter <sup>4</sup>	Unit	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method and Minimum Level, units, respectively
Flow	mgd	-----	During the first 30 minutes of each discharge event	See Section I.A.3. above, of this MRP
1,2-Dibromo-3-chloropropane(DBCP)	µg/L	Grab	"	<b>RL at 0.2 µg/L</b> See Section I.A. 2, 3. above, of this MRP
<b>1,2,3-Trichloropropane (1,2,3-TCP)</b>	<b>µg/L</b>	<b>Grab</b>	"	<b>RL at 0.005 µg/L</b> <b>See Section I.A. 2, 3. above, of this MRP</b>

4. Attachment F, page F-5, modify first paragraph in Section III. Industry Description, as follows:

The wellhead treatment systems (WTS) located at various sites within the upper Santa Ana River Basins treat groundwater polluted by solvents/volatile organic compounds and/or other substances such as perchlorate. These WTS deliver the treated water to potable water supply systems. At these sites, waste streams are derived as the result of facility **installation, development, and** operations, including well purge water, **wastewater from treatment system testing**, and backwash (see description below). These WTS sites are distinct from other groundwater remediation projects, such as typical petroleum hydrocarbon remediation sites, where the product water is discharged to surface or ground waters. These discharges of treated water are regulated under Order No. R8-2007-0008, NPDES No. CAG918001, general waste discharge requirements for discharges to surface waters of extracted and treated groundwater resulting from the cleanup of groundwater polluted by petroleum hydrocarbons and/or solvents at service stations and similar sites. Pollutants commonly encountered at the WTS sites are perchlorate and volatile organics, such as Tetrachloroethene (PCE) and Trichloroethylene (TCE), **and semi-volatile organics, such as 1,2-Dibromo-3-chloropropane (DBCP).**

5. Attachment F, page F-5, add new second paragraph to Section III.A., Description of Sites, as follows:

**The City of Loma Linda proposes to install, develop, and operate a new WTS plant in early 2009. The proposed WTS will generate potable water to the City of Loma Linda.**

6. Attachment F, page F-6, modify Section III. C, Description of Wastewater as follows:

### **C. Description of Wastewater**

WTS generate **four** ~~three~~ kinds of wastewaters:

- 1. Discharges of wastewater associated with well installation, development, treatment system testing and purging;**
2. Purged well water discharges. The purged water<sup>2</sup> is discharged at initial and routine startup of the wells and during sampling of influent flow. Discharges of well purge water are raw groundwater without GAC or ion exchange/resin system treatment;
3. Discharges during carbon bed expansion, carbon change, backwashing or fluffing. The backwash water and filter rinse water or fluffing water is discharged at startup and routine operation of the GAC treatment system. Water used for backwashing or fluffing is treated groundwater; and
- 4, Disinfection and rinse water discharges. Wastewater from chlorine-disinfection of wells and GAC vessel(s) is discharged before startup of the GAC system. Water used for disinfection is potable water.

7. Attachment F, page F-13, Section V.C.2.c., add new paragraph as follows:

#### **c. Maximum Contaminant Levels:**

The California Department of Public Health Maximum Contaminant Levels (MCLs) for TCE and PCE are used as basis for the effluent limitations for discharges to receiving waters not designated for municipal and domestic supply (MUN).

**DBCP is not a priority pollutant. The MCL for DBCP is used as the basis for effluent limitations for discharges of DBCP to waters that are designated and those not designated MUN.**



8. Attachment F, page F-14, Section V.C.3., modify second paragraph and add third paragraph into Section V.C.3., as follows:

Pollutants commonly encountered at the wellhead treatment system sites are perchlorate, volatile organics, such as Tetrachloroethene (PCE) and Trichloroethylene (TCE), **and in some cases, semi-volatile organics, such as DBCP. Low level concentrations of 1,2,3-Trichloropropane (1,2,3-TCP) may also be present at some sites. Based on reported monitoring data, it is determined that** Consequently, there is reasonable potential for TCE, PCE, **DBCP**, and perchlorate to be discharged from WTS sites at levels that would result in violation of water quality standards. This Order establishes effluent limitations for TCE, PCE, **DBCP**, and perchlorate. **This Order also establishes monitoring for 1,2,3,-TCP.**

9. Attachment F, page F-15, Section V.C.4., modify second paragraph as follows:

The Policy specifies calculation procedures for deriving effluent limitations in waste discharge requirements. Step 6 of the procedure stipulates that the average monthly effluent limitation is set equal to the effluent concentration allowance<sup>3</sup>. Where there is no mixing zone allowance and there is no freshwater aquatic life water quality objective in the California Toxics Rule, the effluent concentration allowance (ECA) is equal to the applicable human health objective. Therefore, in these circumstances the AML is equal to the human health objective. The Policy also stipulates that where receiving waters are designated with the municipal water supply beneficial use (MUN), the human health objective for the consumption of water and organisms applies in calculating the effluent limitation; otherwise, the human health objective for the consumption of organisms only applies. This Order includes effluent limits for discharges to receiving waters that are designated MUN and for those that are not designated MUN. For discharges to receiving waters designated MUN, the AMLs for TCE and PCE were taken from the California Toxics Rule (CTR) human health objectives for the consumption of water and organisms. For receiving waters not designated MUN, the AMLs for TCE and PCE are based on California Department of Public Health (CDPH) maximum contaminant levels (MCL's), rather than the CTR human health objectives for consumption of water and organisms. **DBCP is not a priority pollutant. The effluent limitations for DBCP for discharges to waters designated MUN and to those waters not designated MUN are based on the MCL.** The MCL approach was used to derive effluent limitations in the general groundwater permit Order R8-2007-0008, under which these discharges were previously regulated. This MCL approach is employed in this Order to assure conformance with federal antibacksliding regulations. Each AML effluent limitation was multiplied by a 2.01 factor to determine the maximum daily concentration effluent limits for **DBCP**, TCE and PCE. This factor is the average monthly effluent limit multiplier taken from Table 2 of the Policy. The multiplier corresponds to a coefficient of variation of 0.6 and an estimated monthly sampling frequency of the effluent equal to 4<sup>4</sup>.

In conformance with antibacksliding requirements, the AML discharge limitation for perchlorate was based on current effluent limitations in Order No. R8-2003-0002, rather than the MCL for perchlorate that was recently established by CDPH. The same multiplier factor (2.01) was used to derive the maximum daily effluent limit. (There is no CTR objective for perchlorate).

10. Attachment F, page F-17, modify Tables in Section V.F.4., as follows:

4. Summary of Final Effluent Limitations:

**Table 1. Limitations Applicable to Discharges into Receiving Waters Designated MUN**

Constituent	Effluent Limitations		Basis of Limitations		
	Maximum Daily Concentration Limit (µg/L)	Average Monthly Concentration Limit, (µg/L)	MCL (µg/L)	CTR, (µg/L)	
				Human Health - Water and Organisms	Human Health Organisms only
Tetrachloroethylene (PCE)	1.6	0.8	5	<b>0.8</b>	8.9
Trichloroethylene (TCE)	5.4	2.7	5	<b>2.7</b>	81
Perchlorate	8	4	6	--	--
<b>1,2-Dibromo-3-chloropropane(DBCP)</b>	<b>0.4</b>	<b>0.2</b>	<b>0.2</b>	--	--

Bolded number is the basis for the effluent limitation

**Table 2. Limitations Applicable to Discharges into Receiving Waters Not Designated MUN**

Constituent	Effluent Limitations		Basis of Limitations		
	Maximum Daily Concentration Limit (µg/L)	Average Monthly Concentration Limit, (µg/L)	MCL (µg/L)	CTR, (µg/L)	
				Human Health - Water and Organisms	Human Health Organisms only
Tetrachloroethylene (PCE)	10	5	<b>5</b>	0.8	8.9
Trichloroethylene (TCE)	10	5	<b>5</b>	2.7	81
Perchlorate	8	4	6	--	--
<b>1,2-Dibromo-3-chloropropane(DBCP)</b>	<b>0.4</b>	<b>0.2</b>	<b>0.2</b>	--	--

Bolded number is the basis for the effluent limitation

**RECOMMENDATION:**

Adopt Order No. R8-2009-0004, as presented.

Comments were solicited from the following agencies:

U.S. Environmental Protection Agency, Permits Issuance Section (WTR-5) - Doug Eberhardt

U.S. Fish and Wildlife Service - Carlsbad

U.S. Army District, Los Angeles, Corps of Engineers - Regulatory Branch

State Water Resources Control Board, Office of the Chief Counsel – David Rice

State Department of Water Resources - Glendale

State Department of Fish and Game, Ontario

South Coast Air Quality Management District

California Department of Public Health, Santa Ana - Oliver Pacifico

California Department of Public Health, San Diego - Steve Williams

California Department of Public Health, San Bernardino - Sean McCarthy

Orange County Water District - Nira Yamachika/Greg Woodside

Orange County Resources and Development Management Department - Chris Crompton

Orange County Public Facilities and Resources Department, Flood Control – Andy Ngo

Orange County Planning & Development Services Department

Orange County Health Care Agency – Larry Honeybourne

San Bernardino County Flood Control and Transportation Department - Naresh Varma

San Bernardino County Environmental Health Department

San Bernardino County Department of Public Works, Environmental Management Division

Riverside County Flood Control and Water Conservation District – Jason Uhley

Riverside County Environmental Health Department - Sandy Bonchek

City of Riverside, Public Utilities – David Ferguson

City of San Bernardino, Municipal Water Department – Stacey Aldstadt

City of Loma Linda, Public Works Department – T. Jarb Thaipejr

Tetra Tech, Irvine – Scott Szyborski

Orange County Coastkeeper - Garry Brown

Lawyers for Clean Water C/c San Francisco Baykeeper

Inland Waterkeeper – Lee Reeder

California Regional Water Quality Control Board  
Santa Ana Region

Order No. R8-2009-0004

Amending Order No. R8-2008-0059, NPDES No. CAG648001  
General Waste Discharge Requirements for Discharges to Surface Waters  
of Process Wastewater Associated with Certain Wellhead Treatment Systems

The California Regional Water Quality Control Board, Santa Ana Region (hereinafter, Board), finds that:

1. On June 6, 2008, the Board adopted Order No. R8-2008-0059, NPDES No. CAG648001, prescribing general waste discharge requirements for discharges to surface waters of process wastewater associated with certain wellhead treatment systems (WTS) within the Santa Ana Region.
2. Order No. R8-2008-0059, NPDES No. CAG648001 includes effluent limitations for tetrachloroethene (PCE), trichloroethylene (TCE), and perchlorate, which are the pollutants being addressed by wellhead treatment systems (WTS) sites that are currently operating in the Cities of Riverside and San Bernardino..
3. The City of Loma Linda is proposing to construct a new WTS plant in the City of Loma Linda. Recently, the City filed a Notice of Intent to be enrolled under Order No. R8-2008-0059, NPDES No. CAG648001. The City's Notice of Intent reported that the underlying groundwater that will be extracted for treatment and potable use contains TCE, perchlorate, elevated concentrations of 1,2-Dibromo-3-chloropropane (DBCP) and low level concentrations of 1,2,3-Trichloropropane (1,2,3-TCP). Order No. R8-2008-0059 does not include effluent limitations for either DBCP or 1,2,3-TCP.
4. It is appropriate to amend Order No. R8-2008-0059 to include effluent limitations for DBCP and to include monitoring requirements for 1,2,3-TCP. Discharges from the new WTS plant can then be regulated under the Order, which would obviate the need for the development and consideration of an individual permit for the facility.
5. In accordance with Water Code Section 13389, amending the waste discharge requirements for this discharge is exempt from those provisions of the California Environmental Quality Act contained in Chapter 3 (commencing with Section 21100), Division 13 of the Public Resources Code.
6. The Board has notified the discharger and other interested agencies and persons of its intent to amend waste discharge requirements for the discharge and has provided them with an opportunity to submit their written views and recommendations.
7. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

**IT IS HEREBY ORDERED** that Order No. R8-2008-0059 be amended as follows:

1. Order No. R8-2008-0059, page 7 of 25, modify second paragraph of Section III. B. Industry Description, as follows:

Wellhead treatment systems (WTS) are designed and operated in the Region such that the product water is discharged to potable water distribution systems, rather than to surface waters. Seven such systems are now and have been operated for some years by the Cities of Riverside and San Bernardino to address groundwater contaminated by solvents and perchlorate. Other wellhead treatment systems are expected to be installed to address other recently identified contamination problems (e.g., perchlorate), with the intent to return the product water to potable water distribution systems. These systems act to restore the quality of the groundwater management zones and provide reliable water supply for domestic, industrial, and municipal uses. Generally, groundwater is extracted, treated and then delivered to the potable water supply systems. Wastes are generated in the treatment process. The most commonly used method of treatment of solvent-contaminated groundwater is granular activated carbon (GAC) adsorption. At some sites in the City of San Bernardino, air-stripping towers are used to treat a small portion of the extracted groundwater. Ion exchange/resins systems are used for treatment of perchlorate contaminated groundwater.

2. Order No. R8-2008-0059, page 13 of 25, modify Table 1 and Table 2 of Section V.A.1., Final Effluent Limitations, to include effluent limitations for DBCP, as follows:

**Table 1. Effluent Limitations Applicable to Discharges into Receiving Waters Designated MUN**

Constituent	Maximum Daily Concentration Limit (µg/L)	Average Monthly Concentration Limit (µg/L)
Tetrachloroethene (PCE)	1.6	0.8
Trichloroethylene (TCE)	5.4	2.7
Perchlorate	8.0	4.0
1,2-Dibromo-3-chloropropane (DBCP)	0.4	0.2

**Table 2. Effluent Limitations Applicable to Discharges into Receiving Waters Not Designated MUN**

Constituent	Maximum Daily Concentration Limit (µg/L)	Average Monthly Concentration Limit (µg/L)
Tetrachloroethene (PCE)	10.0	5.0
Trichloroethylene (TCE)	10.0	5.0
Perchlorate	8.0	4.0
1,2-Dibromo-3-chloropropane(DBCP)	0.4	0.2

3. Attachment E, Section IV.A., page E-7, modify Table 3. Effluent Monitoring Program, as follows; the rest of the Table 3 remains unchanged:

**Table 3. Effluent Monitoring Program**

Parameter <sup>4</sup>	Unit	Sample Type	Minimum Sapling Frequency	Required Analytical Test Method and Minimum Level, units, respectively
Flow	mgd	-----	During the first 30 minutes of each discharge event	See Section I.A.3. above, of this MRP
1,2-Dibromo-3-chloropropane(DBCP)	µg/L	Grab	"	RL at 0.2 µg/L See Section I.A. 2, 3. above, of this MRP
1,2,3-Trichloropropane (1,2,3-TCP)	µg/L	Grab	"	RL at 0.005 µg/L See Section I.A. 2, 3. above, of this MRP

4. Attachment F, page F-5, modify first paragraph in Section III. Industry Description, as follows:

The wellhead treatment systems (WTS) located at various sites within the upper Santa Ana River Basin treat groundwater polluted by solvents/volatile organic compounds and/or other substances such as perchlorate. These WTS deliver the treated water to potable water supply systems. At these sites, waste streams are derived as the result of facility installation, development, and operations, including well purge water, wastewater from treatment system testing, and backwash (see description below). These WTS sites are distinct from other groundwater remediation projects, such as typical petroleum hydrocarbon remediation sites, where the product water is discharged to surface or ground

waters. These discharges of treated water are regulated under Order No. R8-2007-0008, NPDES No. CAG918001, general waste discharge requirements for discharges to surface waters of extracted and treated groundwater resulting from the cleanup of groundwater polluted by petroleum hydrocarbons and/or solvents at service stations and similar sites. Pollutants commonly encountered at the WTS sites are perchlorate and volatile organics, such as Tetrachloroethene (PCE) and Trichloroethylene (TCE), and semi-volatile organics, such as 1,2-Dibromo-3-chloropropane (DBCP).

5. Attachment F, page F-5, add new second paragraph to Section III.A., Description of Sites, as follows:

The City of Loma Linda proposes to install, develop, and operate a new WTS plant in early 2009. The proposed WTS will generate potable water to the City of Loma Linda.

6. Attachment F, page F-6, modify Section III. C, Description of Wastewater as follows:

#### **C. Description of Wastewater**

WTS generate four kinds of wastewaters:

1. Discharges of wastewater associated with well installation, development, treatment system testing and purging;
2. Purged well water discharges. The purged water<sup>2</sup> is discharged at initial and routine startup of the wells and during sampling of influent flow. Discharges of well purge water are raw groundwater without GAC or ion exchange/resin system treatment;
3. Discharges during carbon bed expansion, carbon change, backwashing or fluffing. The backwash water and filter rinse water or fluffing water is discharged at startup and routine operation of the GAC treatment system. Water used for backwashing or fluffing is treated groundwater; and
4. Disinfection and rinse water discharges. Wastewater from chlorine-disinfection of wells and GAC vessel(s) is discharged before startup of the GAC system. Water used for disinfection is potable water.

7. Attachment F, page F-13, Section V.C.2.c., add new paragraph as follows:

##### **c. Maximum Contaminant Levels:**

The California Department of Public Health Maximum Contaminant Levels (MCLs) for TCE and PCE are used as basis for the effluent limitations for discharges to receiving waters not designated for municipal and domestic supply (MUN).

DBCP is not a priority pollutant. MCL is used as the basis for effluent limitations for discharges of DBCP to waters that are designated and those not designated MUN.

8. Attachment F, page F-14, Section V.C.3., modify second paragraph and add third paragraph into Section V.C.3., as follows:

Pollutants commonly encountered at the wellhead treatment system sites are perchlorate, volatile organics, such as Tetrachloroethene (PCE) and Trichloroethylene (TCE), and in some cases, semi-volatile organics, such as DBCP. Low level concentrations of 1,2,3-Trichloropropane (1,2,3-TCP) may also be present at some sites. Based on reported monitoring data, it is determined that there is reasonable potential for TCE, PCE, DBCP, and perchlorate to be discharged from WTS sites at levels that would result in violation of water quality standards. This Order establishes effluent limitations for TCE, PCE, DBCP, and perchlorate. This Order also establishes monitoring for 1,2,3,-TCP.

9. Attachment F, page F-15, Section V.C.4., modify second as follows:

The Policy specifies calculation procedures for deriving effluent limitations in waste discharge requirements. Step 6 of the procedure stipulates that the average monthly effluent limitation is set equal to the effluent concentration allowance<sup>3</sup>. Where there is no mixing zone allowance and there is no freshwater aquatic life water quality objective in the California Toxics Rule, the effluent concentration allowance (ECA) is equal to the applicable human health objective. Therefore, in these circumstances the AML is equal to the human health objective. The Policy also stipulates that where receiving waters are designated with the municipal water supply beneficial use (MUN), the human health objective for the consumption of water and organisms applies in calculating the effluent limitation; otherwise, the human health objective for the consumption of organisms only applies. This Order includes effluent limits for discharges to receiving waters that are designated MUN and for those that are not designated MUN. For discharges to receiving waters designated MUN, the AMLs for TCE and PCE were taken from the California Toxics Rule (CTR) human health objectives for the consumption of water and organisms. For receiving waters not designated MUN, the AMLs for TCE and PCE are based on California Department of Public Health (CDPH) maximum contaminant levels (MCL's), rather than the CTR human health objectives for consumption of water and organisms. DBCP is not a priority pollutant. The effluent limitations for DBCP for discharges to waters designated MUN and to those waters not designated MUN are based on the MCL. The MCL approach was used to derive effluent limitations in the general groundwater permit Order R8-2007-0008, under which these discharges were previously regulated. This MCL approach is employed in this Order to assure conformance with federal antibacksliding regulations. Each AML effluent limitation was multiplied by a 2.01 factor to determine the maximum daily concentration effluent limits for DBCP, TCE and PCE. This factor is the average monthly effluent limit multiplier taken from Table 2 of the Policy. The



multiplier corresponds to a coefficient of variation of 0.6 and an estimated monthly sampling frequency of the effluent equal to 4<sup>4</sup>. In conformance with antibacksliding requirements, the AML discharge limitation for perchlorate was based on current effluent limitations in Order No. R8-2003-0002, rather than the MCL for perchlorate that was recently established by CDPH. The same multiplier factor (2.01) was used to derive the maximum daily effluent limit. (There is no CTR objective for perchlorate).

10. Attachment F, page F-17, modify Tables in Section V.F.4., as follows:

4. Summary of Final Effluent Limitations:

**Table 1. Limitations Applicable to Discharges into Receiving Waters Designated MUN**

Constituent	Effluent Limitations		Basis of Limitations		
	Maximum Daily Concentration Limit (µg/L)	Average Monthly Concentration Limit, (µg/L)	MCL (µg/L)	CTR, (µg/L)	
				Human Health - Water and Organisms	Human Health Organisms only
Tetrachloroethylene (PCE)	1.6	0.8	5	<b>0.8</b>	8.9
Trichloroethylene (TCE)	5.4	2.7	5	<b>2.7</b>	81
Perchlorate	8	4	6	--	--
1,2-Dibromo-3-chloropropane(DBCP)	0.4	0.2	0.2	--	--

Bolded number is the basis for the effluent limitation

**Table 2. Limitations Applicable to Discharges into Receiving Waters Not Designated MUN**

Constituent	Effluent Limitations		Basis of Limitations		
	Maximum Daily Concentration Limit (µg/L)	Average Monthly Concentration Limit, (µg/L)	MCL (µg/L)	CTR, (µg/L)	
				Human Health - Water and Organisms	Human Health Organisms only
Tetrachloroethylene (PCE)	10	5	<b>5</b>	0.8	8.9
Trichloroethylene (TCE)	10	5	<b>5</b>	2.7	81
Perchlorate	8	4	6	--	--
1,2-Dibromo-3-chloropropane(DBCP)	0.4	0.2	0.2	--	--

Bolded number is the basis for the effluent limitation

11. All other conditions and requirements of Order No. R8-2008-0059, including Attachments, shall remain unchanged.

I, Gerard J. Thibeault, Executive Officer, do hereby certify that the forgoing is a full, true, and correct copy of an order adopted by the California Regional Water Quality Control Board, Santa Ana Region, on January 23, 2009.

\_\_\_\_\_  
Gerard J. Thibeault  
Executive Officer